University of Sana'a
Faculty of pharmacy

Final exam (2Hr)
3rd year Pharmacognosy (2015)

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A-Diagramatize (10):
1- T.S of linseed or *Ammi visnaga*
2- microscopical character of nux-vomica

B-Chose the correct answer (20)

1- Rauwolfia rhizome is different from the root by the presence of
a- a small central pith
b- stomata
c- hair

2- Schizolysigenous gland is found in:
a- senna leaves
b- digitalis leaves
c- clove flower buds

3-liquorice is used topically for
a- Peptic ulcer
b- Expectorant
c- Psoriasis

4-Non glandular hair with cystoliths of $CaCO_3$ is found in:
a. Xanthium strumarium
b. *Cannabis sativa*
c. *lobelia inflata*

5- Which compound is responsible for the sweet taste of liquorice rhizome:
a- Glycyrrhizin
b- chalcone
c- tannin

6-Papaverine is the active compound of
a- *Ammi visnaga*
b- *Hyoscyamus niger*
c- *Papaver somniferum*

7- Test for isobarbaloin give no color with:
a- Cape aloe
b- Socotrine aloe
c- Curacao aloe

8-The seed of nux vomica is
a- exalbuminaus
b- albuminaus
c- both a and b

9- The weak base alkaloids of poppy fruit is
a- morphine
b- codeine
c- noscapine

10- The powder of nutmeg seed contain:
a- Prism of CaOx
b- Cluster of Caox
c- Prism of K-tartara

11- Tragacanthin is the component of
a- Acacia gum
b- Tragacanth gum
c- Colophony

12- T-shaped non glandular hair is found in
a- Insect flower
b- Clove flower
c- Chamomile flower

13- All are Rauwolfia compounds except:
a- Reserpine
b- ajmalin
c- Gitoxin

14- The powder of flower buds of clove shouldn't contain:
a- starch
b- prism of caox
c- *both* a and b

15- raphides of CaOX are found in
a- Ipecacuanha root
b- Hyoscyamus Leaf
c- Ginger rhizome

16- the flower of *Artemisia cina* is used as:
a- antiinflamation
b- Antianthelmintic
c- cardiotonic

17- the seeds of cardamom should be separated recently to
a- avoid the loss of volatile oil
b- differentiate between different varieties
c- both a and b

18- Ergotamine is used for
a- migraine
b- labour
c- mental disorders

19- strychnine give a +ve test with:
a- Mandelin's reagent
b- conc. HNO_3
c- $FeCl_3$

20-Van Urk reaction is test for
a- Essential oil
b- Ergot alkaloids
c- Atropa alkaloids

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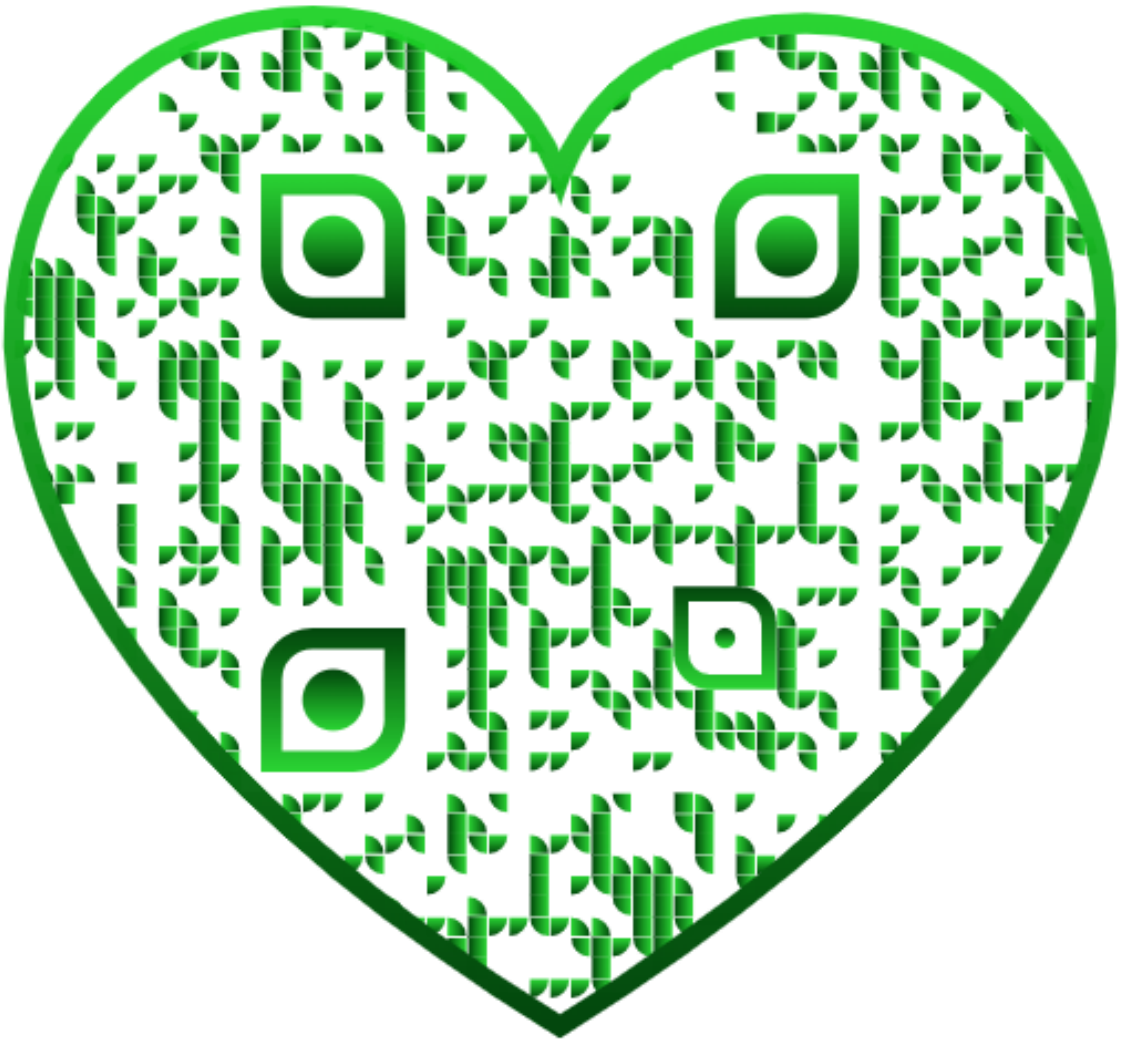

C-Fill the blanks from the list bellow (write the number –the appropriate letter) (20)

Convolvulus glabra var. *typica* is found in –1– while *C. glabra* var. β–*violacea* is from –2–/ Twinned covering trichomes is found in –3–./The fresh Saffron contains –4– which upon drying undergoes decomposition to –5– which on steam distillation gives –6– which is responsible for odor./ *Carapichea ipecacuanha* Known as ..7.. and cultivated in –8– but *Cephaelis acuminata* , known as –9– and exported from –10–/Clove of 11– varieties (A) are reddish–brown in color and are the larger than –12– variety./ Strychnine is used as a –13–./ Reserpine is used in ..14.. while ajmaline is used for ..15../Shaggy hair is found in –16–./The active members of ergot alkaloids are derivatives of –17– e.g –18–./ Socotrine aloes from –19– species while Cape aloes from –20–.

a– hypertensive	f– Cartagena	k–Zanzibar	p– Brazil	u– ergometrinine
b–lysergic acid	g– rodenticide	l– Rio	q–*Aloe frox*	v–purgative
c– safranal	h– Cardiac arrhythmias	m– Protocrocin	r– Colombia	w–cinnamon
d– Spanish	i–*Arnica*	n–cumin	s– isolysergic a.	x– anise
e– Penang	j– Iran	o–ergometrine	t– picrocrocin	y–*Aloe perryi*

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1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

D–Find 6 incorrect statements and re–write them in your answer sheet (20)

( ) *Rauvolfia serpentine* rhizome is different from *R. vomitoria* by the presence of Sclereids and has wider vessel.

( ) *Annulation* in Rio root is very crowded and more projecting than Cartagena root

( ) Cannabis consist of the dried flowering and fruiting tops of male plants of *Cannabis sativa* and cultivated in Europe.

( ) Clove is the dried flowering bud of *Eugenia caryophyllus* contains not less than 15% v/w of volatile oil

( ) The flower heads of Santonica should be collected before expanding during July and August to yield 3% of the active compound, chromosantonin,

( ) Addition of chloralhydrate to the powder of nutmeg showed fat crystals as result of the presence of tannins.

( ) The clove is in good quality when floats in water which is boiled then cold.

( ) The flowers of pyrethrum are not toxic to insects unless it is dried.

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( ) Aggregate fruit formed from a single flower with many ovaries e.g. Mulberries.

( ) Alcoholic extract of the *Ammi visnaga* gives blue fluorescence in UV.

II- Answer the following questions (3D):

1- What is the active compounds and uses of the following plants:

	Botanical origin	compounds	uses
Fenugreek			
Ammi visnaga			
Vinca			
Dragons' blood			

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2-What are the advantages of pyrethrum as insecticide over the synt
ecticides?

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